

Remarks

Claims 4 and 9-11 are pending in the application. Claim 4 is currently amended.

35 USC 102 rejections

CLAIM 4

Claim 4 stands rejected under 35 U.S.C. 102(e) as being anticipated by Inoue (U.S. Pat. No. 6,284,624). Regarding Claim 4, Inoue et al. at least fails to teach “wherein after the growing the second oxide, the one or more upper corners of said trench are round” as recited in amended Claim 4.

Inoue discloses growing a first oxide layer more deeply into the semiconductor substrate at that surface of the semiconductor substrate located in the trench to which is subjected to enhanced thermal oxidation than at other portions so as to provide an uneven interface between and oxide film and the semiconductor substrate to reduce a net compressive stress. (Inoue, Column 4, lines 26-39). Further, the first oxide layer is removed and a second layer formed by thermally oxidizing the semiconductor substrate forming a denser film with superior dielectric strength. (Inoue, Column 3, lines 49-53). Inoue does not disclose the one or more upper corners of said trench are round.

The oxide growth/oxide removal/oxide growth process of the claimed invention rounds the silicon corners 119 of trench 114, avoiding sharp trench corners that can cause a weakness in the subsequently formed tunnel oxide at the corners. See FIGs. 4-5 and Specification, page 11 line 26 – page 12 line 1.

Accordingly, for at least the foregoing reasons, Inoue fails to teach the limitations of Claim 4. The rejection of Claim 4 is thus unsupported, and must be withdrawn.

CLAIM 9

Claims 9-11 stand rejected under 35 U.S.C. 102(b) as being anticipated by Teng et al. (U.S. Pat. No. 4,890,144). Regarding Claim 9, Teng et al. at least fails to teach “forming a shared source region.”

Teng discloses forming a source/drain region 30 in the bottom floor 21 of trench 18. (Teng, Column 4, lines 50-51). A source/drain region is not the same as a shared source region.

Accordingly, for at least the foregoing reasons, Teng et al. fails to teach the limitations of Claim 9. The rejection of Claim 9 is thus unsupported, and must be withdrawn. Claims 10-11 depend from allowable Claim 9 and are allowable for at least this reason.

Conclusion

For the foregoing reasons, it is submitted that the application is in condition for allowance, and indication of allowance by the Examiner is respectfully requested. If the Examiner has any questions concerning this application, he or she is requested to telephone the undersigned at the telephone number shown below as soon as possible. If any fee insufficiency or overpayment is found, please charge any insufficiency or credit any overpayment to Deposit Account No. 02-2666.

Respectfully submitted,

Intel Corporation

Date: ____ July 19, 2005 ____ /Rita M. Wisor/ _____

Rita M. Wisor
Reg. No. 41,382

Attorney Phone Number: (512) 732-3923

Correspondence Address: Blakely Sokoloff Taylor & Zafman, LLP
12400 Wilshire Blvd
Seventh Floor
Los Angeles, California 90025-1026